

• Jennifer Dahl
Friendship Public Charter Schools
Rearticulated Science Standards for 5, 8 and Biology

General thoughts about the changes to the science standards...

- The addition of the Preamble helps teachers to understand the core knowledge that students should gain as they go through an entire year of science. Specific focus on understanding and being able to use the scientific method for inquiry.
 - o I agree that the preamble will reduce the number of redundant concepts throughout the standards; however, will it be clear to teachers that these concepts should be embedded throughout the year?
 - o This will probably become more clear through the Scope and Sequence documents that are subsequently created but the wording of the Preamble does not clearly articulate this as it is currently written.

5th Grade Changes

- The addition of the strand allows cohesive units to emerge much more simply than before.
- How do concepts from the Preamble translate into observations and investigations in the unit? Perhaps they should be noted with the Standard.
 - o Example
Grade 5 Standard 4: Space ScienceStudents will be introduced to Space Science: Students should have an appreciation for our solar system and the concept that they are similar and dissimilar systems in space.
 - o Within the Grade 4 Preamble it says, "Students should observe stars and identify ones that are unusually bright, and others that have unusual colors, such as red and blue."
 - o The information from the Preamble is not included in the indicators. Perhaps it can be added to create indicator 5.4.4 or added to the Standard as a "Critical Observation" to emphasize the importance of such observations.
- This also applies to the other observations/investigations from the Preamble.
- Other notes
 - o Standard 4: The emphasis from the Broad Concept 5.3 has been lost with the transition to Standard 4.
 - Broad Concept 5.3 "The solar system consists of planets and other bodies that orbit the sun in predictable path."
 - Standard 4: "Students will be introduced to Space Science: Students should have an appreciation for our solar system and the concept that there are other similar and dissimilar systems in space. Students should be able to..."
 - o The standards create a cohesive overview of the unit and allow the indicators to function as the standards do for other grade levels. What Science calls an indicator is a standard in other content areas.

8th Grade Changes

- Same concern as above... how do the things “students should be exposed to”, “students should investigate”, and “students should discover” translate into the standards/indicators without being clearly articulated in the appropriate places. Will these things be assessed throughout the year or as they’re covered in class?
- Standards lack the clarity that the old “Broad Concepts” would provide.
- The smaller standards (units) will make it more feasible to cover the 66 indicators in a more cohesive manner.

Biology Changes

- Same concern as above about how do the items from the Preamble translate into teaching specific concepts. However there is more embedding of the “Broad Concepts” into the Standards than there was in grades 5 and 8.
- The changes to the indicators make them much more specific.
- Many of the standards are very lower order skills. (Describe, explain, Know...))

Thoughts/reflections from the PPT Presentation from 2/17 Meeting

- According to the edCount data, the Range of Knowledge being assessed in grades 5 and 8 is weak (38% and 27%, respectively). How will they assess more indicators through formalized assessments without significantly lengthening the assessment?
- Changing to the Strand/Standard/Indicator system has provided greater clarity on what students are expected to be learning. However, for the sake of clarity and consistency with other content areas it may make sense to name them Strand/Broad Concept/Standard